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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/086,821	05/29/1998	MARCO LARA	ATV-004	8789

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EXAMINER

SALAD, ABDULLAHI ELM I

ART UNIT PAPER NUMBER

2157

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/086,821

Applicant(s)

LARA ET AL.

Examiner

Salad E. Abdullahi

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-16, 20 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-16,20 and 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on 2/7/2005 has been received and made of record.
2. Applicant's arguments with regard to claims 1, 6-16, 20 and 25-33 have been fully considered but are moot in view of new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1, 6-16, 20, 26 and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Hu U.S. Patent No. 6,173,322[hereinafter Hu] in view of Graber et al., U.S. Patent No. 5,717,860[hereinafter Graber] and further in view of Callsen et al., U.S. Patent No. 5,884,022[hereinafter Callsen].

Art Unit: 2157

As per claim 1, Hu discloses a method for distributing browser web page requests among two or more servers, comprising:

- monitoring the servers, each web server being computer program running within a host computer, the monitoring performed to determine if a predetermined condition (i.e. failed or overloaded)(see col. 15, lines 11-16);
- if the predetermined condition does exist at least one of the servers, redirecting by that server at least one client request from that server to another one of the servers such that the browser requests the web page from another one of the web servers(see col. 6, lines 11-22 and col. 4, line 66 to col. 5, line 8).

HU is silent regarding:

redirecting regardless of the availability of separate interceptor process for redirecting requests.

Graber in an analogous art discloses a method of redirecting web page requests regardless of the availability of separate interceptor process for redirecting requests (see figs. 1 and 6, col. 6, lines 22-37 and col.12, lines 18-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teaching of Graber such as redirecting browser requests regardless of the availability of separate interceptor process for redirecting requests into Hu's system such that browser requests can directed the most appropriate server that serve the request, thus improving system response time.

Art Unit: 2157

Hu and Graber are silent regarding: automatically restarting that web server upon detection of the predetermined condition in order to clear the predetermined condition. the restarting initiated by an agent in the host computer.

Callsen discloses a system for automatically restarting a web server upon detection of a predetermined condition (i.e., hanging state) in order to clear the predetermined condition the restarting initiated by an agent (ORB Daemon) in the host computer (see fig 5 and col. 9, lines 19 to col. 10, line 5). Furthermore, Callsen teaches daemonic servers are automatically restarted by the ORB daemon (i.e., agent)(see col. 5, lines 21-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Callsen such as automatically restarting that web server upon detection of the predetermined condition in order to clear the predetermined condition the restarting initiated by an agent in the host computer in to the system of Hu and Graber to enable recovery from the predetermined condition to occur in a timely manner.

In considering claim 6, Hu discloses the method of claim 1 wherein the monitoring step comprises monitoring the system load of the host server (see col. 15, lines 1-16).

In considering claim 7, Hu discloses the method of claim 1 wherein the predetermined condition comprises a CPU utilization or memory or failure etc (see col. 9, lines 19-46).

Art Unit: 2157

In considering claim 8 Hu discloses the method of claim 1 wherein the predetermined condition comprises a CPU utilization or memory or failure etc (see col. 9, lines 19-46).

In considering claim 9, HU discloses the method of claim 1, wherein the redirecting step comprises redirecting only if the request is for one of a predetermined set of web pages (i.e., dynamic pages or static pages) (see fig. 6 and col. 12, lines 10-42).

In considering claim 10, Hu discloses the method of claim 9, wherein the predetermined set is predetermined by list of web pages included in the web page included in the set (see fig. 6, and col.12, lines 18-66).

In considering claim 11, Hu discloses the method of claim 9, wherein the predetermined set is predetermined by a list of web pages excluded from the set (see col. 12, lines 10-42).

In considering claim 12, Hu discloses the method of claim 1, wherein the redirecting step comprises redirecting only if the request is for web page that does not have state (i.e., web pages not cached) (see fig. 6, and col. 12, lines 10-42 and col. 13, lines 1-21).

In considering claim 13, Hu discloses the method of claim 12, wherein the redirecting step comprises:

Art Unit: 2157

determining whether the web page is included in a list of web pages that have state (i.e., list of cached web pages) (see fig. 6, and col. 12, lines 10-42).

redirecting only if the web page is not included list (see fig. 6, and col. 12, lines 10-42 and col. 13, lines 1-21).

In considering claim 14, Hu discloses the method of claim 1, wherein the monitoring comprises monitoring web servers to determine if predetermined condition exists and wherein the predetermined condition comprises failure (see col. 11, lines 60-65 and col. 12, lines 10-42).

As per claim 15, Hu discloses a system for distributing browser requests for web pages, comprising:

- a manager (network request manager 102) for monitoring web servers, to determine if a predetermined condition exist at one or more of the web servers (i.e. failed or overloaded)(see fig. 2 and col. 5, lines 520-54 and col. 15, lines 11-16);
a web server (202), the web server being a computer program running within a host computer, the web server being capable of redirecting at least one browser request from the web server to another of the web servers such that the browser requests the web page from another one of the web servers (see col. 6, lines 11-22 and col. 4, line 66 to col. 5, line 8), if predetermined condition exist at one or more of the of the web servers regardless of the availability of separate

Art Unit: 2157

interceptor process for redirecting requests (that is the redirection module 212 with in the web server redirecting requests without separate interceptor) (see fig. 2, and col. 5, lines 41-47 and col. 12, lines 11-42)

- an agent (Pinger module 218) within the host, the agent being in communication with the manager (see fig. 2 and col. 5, lines 48-54).

HU is silent regarding:

redirecting regardless of the availability of separate interceptor process for redirecting requests.

Graber in an analogous art discloses a method of redirecting web page requests regardless of the availability of separate interceptor process for redirecting requests (see figs. 1 and 6, col. 6, lines 22-37 and col.12, lines 18-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teaching of Graber such as redirecting browser requests regardless of the availability of separate interceptor process for redirecting requests into Hu's system such that browser requests can directed the most appropriate server that serve the request, thus improving system response time.

Hu and Graber are silent regarding: wherein if web server fails the agent restarts the web server in order to clear the predetermined condition.

Callsen discloses a system for automatically restarting a web server upon detection of a predetermined condition (i.e., hanging state) in order to clear the predetermined condition the restarting initiated by an agent (ORB Daemon) in the host computer (see fig 5 and col. 9, lines 19 to col. 10, line 5). Furthermore, Callsen teaches daemonic

Art Unit: 2157

servers are automatically restarted by the ORB daemon (i.e., agent)(see col. 5, lines 21-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Callsen such as if web server fails the agent restarts the web server in order to clear the predetermined condition into the system of Hu to enable recovery from the predetermined condition to occur in a timely manner.

In considering claim 16, Hu discloses the system of claim 15, wherein the redirecting step comprises redirecting only if the request is for one of a predetermined set of web pages (see fig. 6 and col. 12, lines 10-42).

As per claim 20, Hu discloses a method for distributing browser web page requests among two or more servers, comprising:

periodically monitoring a web server load metric of a web server, the web server being computer program running within a host computer (failed or overloaded) (see col. 15, lines 11-16);

redirecting by a first web server a browser request from the first web server to another web server, such that the browser requests the web page from another one of the web servers, thereby balancing the load metric of web server(see col. 6, lines 11-22 and col. 4, line 66 to col. 5, line 8).

HU is silent regarding:

Art Unit: 2157

redirecting regardless of the availability of separate interceptor process for redirecting requests.

Graber in an analogous art discloses a method of redirecting web page requests regardless of the availability of separate interceptor process for redirecting requests (see figs. 1 and 6, col. 6, lines 22-37 and col.12, lines 18-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teaching of Graber such as redirecting browser requests regardless of the availability of separate interceptor process for redirecting requests into Hu's system such that browser requests can directed the most appropriate server that serve the request, thus improving system response time.

Hu and Graber are silent regarding: automatically restarting the first web server, the restarting initiated by an agent in the host computer.

Callsen discloses a system for automatically restarting a web server upon detection of the predetermined condition (i.e., hanging state) in order to clear the predetermined condition the restarting initiated by an agent (ORB Daemon) in the host computer (see fig 5 and col. 9, lines 19 to col. 10, line 5). Furthermore, Callsen teaches daemonic servers are automatically restarted by the ORB daemon (i.e., agent)(see col. 5, lines 21-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Callsen such as automatically restarting the first web server, the restarting initiated by an agent in the host computer Hu and Graber to enable recovery from the predetermined condition to occur in a timely manner.

In considering claim 25, Hu discloses a system, wherein the step of redirecting is initiated by an agent (redirection module 212) running on the same host as the server and communication with the server interface, wherein the agent instructs the server to redirect the request (see col. 5, lines 20-54).

In considering claims 26 and 31, Hu discloses a system for distributing content request among two or more servers, comprising:

- monitoring by a central manager (request manager 102) the servers to determine if a predetermined condition exists (i.e. failed or overloaded) at one or more of the servers each web server being a program running with a host computer(see col. 5, lines 20-54 and col. 15, lines 10-60);
- if the predetermined condition does exist at least one of the servers, redirecting by that server at least one client request from that server to another one of the servers such that the browser requests the web page from another one of the web servers col. 4, line 66 to col. 5, line 8 and col. 5, lines 20-54), wherein the step of redirecting is initiated by an agent (redirection module 212) running on the same host as the server and communication with the server interface, wherein the agent instructs the server to redirect the request (see col. 6, lines 11 -22, col. 4, line 66 to col. 5, line 8 and col. 5, lines 20-54).

HU is silent regarding:

redirecting regardless of the availability of separate interceptor process for redirecting requests.

Art Unit: 2157

Graber in an analogous art discloses a method of redirecting web page requests regardless of the availability of separate interceptor process for redirecting requests (see figs. 1 and 6, col. 6, lines 22-37 and col.12, lines 18-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teaching of Graber such as redirecting browser requests regardless of the availability of separate interceptor process for redirecting requests into Hu's system such that browser requests can directed the most appropriate server that serve the request, thus improving system response time.

Hu and Graber are silent regarding: automatically restarting that web server upon detection of the predetermined condition in order to clear the predetermined condition. the restarting initiated by an agent in the host computer.

Callsen discloses a system for automatically restarting a web server upon detection of the predetermined condition (i.e., hanging state) in order to clear the predetermined condition the restarting initiated by an agent (ORB Daemon) in the host computer (see fig 5 and col. 9, lines 19 to col. 10, line 5). Furthermore, Callsen teaches daemonic servers are automatically restarted by the ORB daemon (i.e., agent)(see col. 5, lines 21-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Callsen such as automatically restarting the first web server, the restarting initiated by an agent in the host computer Hu and Graber to enable recovery from the predetermined condition to occur in a timely manner.

Art Unit: 2157

As per claims 27 and 29 Hu, Graber and Callsen, disclose substantial features of the claimed invention as discussed above with respect to claim 1.

Hu, Graber and Callsen are silent regarding: the monitoring step includes monitoring the web page request queue delay.

Nonetheless, monitoring the web page request queue delay of the servers would have been an obvious modification to the system of Hu, Graber and Callsen. Furthermore, Hu teaches performance characteristics or QOS parameters might be measured in a number of different ways such as measuring server response time to determine the status of the servers or how the servers are loaded. One skilled in the art would have been motivated to measure queue delay which contributes the server response time (see col. 9, lines 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention presented with the system of Hu, Graber and Callsen to utilize QOS parameters such request queue delay which is more accurate indicative of the current load of a web servers in order to provide dynamic redirection and overload protection.

In considering claims 28, 30, 32 and 33, Although Hu, Graber and Callsen disclose substantial features of the claimed invention as discussed above with respect to claims 27, 29 and 31,

Hu, Graber and Callsen are silent regarding: the predetermined condition comprises request queue delay length greater than a predetermined value.

Art Unit: 2157

Nonetheless, the predetermined condition comprises request queue delay length greater than a predetermined number would have been an obvious modification to Hu's system. Furthermore, Hu teaches performance characteristics or QOS parameters might be measured in a number of different ways such as measuring server response time to determine the status of the servers or how the servers are loaded (see col. 9, lines 20). Additionally, Hu teaches the monitoring module can be configured to fit users needs. Hence one skilled in the art presented with teaching of Hu, Graber and Callsen would have been motivated to check if the request queue delay length of the server is greater than a predetermined number or certain threshold to dynamically redirect requests to other servers. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize QOS parameters such determining number of requests in the queue delay in order to provide dynamic redirection and overload protection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2157


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONCLUSION

7. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E. Abdullahi whose telephone number is 571-272-4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Abdullahi Salad
5/12/2005